GenCore version 4.5

OM protein - protein search, using sw model

Run on: March 12, 2002, 12:48:03 ; Search time 48.66 Seconds
(without alignments)
19.160 Million cell updates/sec

Title: US-09-801-784-36
Perfect score: 50
Sequence: 1 PSAVALTYSP 10

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 522463 seqs, 74073290 residues

Total number of hits satisfying chosen parameters: 522463

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_1101:*
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22: /SIDS8/gcgdata/geneseq/geneseqp/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	50	100.0	10	19	AAW53301	CS4 CFA/I family s
2	50	100.0	36	18	AAW17903	Immunogenic consen
3	50	100.0	36	19	AAW53307	CS4-CFA/I family s
4	50	100.0	37	18	AAW24221	Peptide fragment f
5	50	100.0	37	18	AAW09420	Immunogenic peptid
6	50	100.0	37	19	AAW48316	Escherichia coli f
7	50	100.0	38	21	AAB06210	Escherichia coli c
8	44	88.0	36	18	AAW17904	Immunogenic consen
9	44	88.0	37	18	AAW24222	Peptide fragment f
10	44	88.0	37	18	AAW17906	Peptide CS1 from d
11	44	88.0	148	18	AAW17912	Peptide CS1 from d
12	44	88.0	172	18	AAR21513	Sequence of a mAb
13	42	84.0	37	18	AAW24223	Peptide fragment f
14	42	84.0	37	18	AAW17907	Peptide CS4 from d
15	42	84.0	117	18	AAW17913	Peptide CS4 from d
16	40	80.0	10	18	AAR28320	Antigenic synthesi
17	40	80.0	37	18	AAW17905	Peptide CFA/I from
18	40	80.0	147	18	AAW17911	Peptide CFA/I from
19	40	80.0	170	19	AAW48341	E. coli colonisati
20	39	78.0	8	19	AAW53297	CS4-CFA/I family s
21	39	78.0	8	19	AAW53299	CS4 CFA/I family s
22	39	78.0	76	22	AAM25886	Human protein sequ
23	36	72.0	8	19	AAW53298	CS4-CFA/I family s
24	36	72.0	8	19	AAW48315	CS4-CFA/I family s
25	36	72.0	67	21	AAY52251	S. pyogenes yajb p
26	36	72.0	342	21	AAY52209	Streptococcus pyog
27	35	70.0	8	19	AAW53300	CS4 CFA/I family s
28	35	70.0	36	18	AAW24224	Peptide fragment f
29	35	70.0	36	18	AAW17908	Peptide CS17 from
30	35	70.0	40	18	AAW17914	Peptide CS17 from
31	35	70.0	44	21	AAB29912	Human secreted pro
32	35	70.0	51	18	AAW17915	Peptide PCFO166 fr
33	35	70.0	204	21	AAG13082	Arabidopsis thalia
34	35	70.0	235	21	AAG13081	Arabidopsis thalia
35	35	70.0	277	21	AAG13080	Arabidopsis thalia
36	35	70.0	374	21	AAY69699	Human wild type ca
37	35	70.0	386	20	AAY29535	Human Zona Pellucid
38	35	70.0	386	21	AAB44436	Human Zona Pellucid
39	35	70.0	521	21	AAB42819	Human GEFX-CRE2*83
40	35	70.0	579	18	AAW08143	RHDV capsid protei
41	34	68.0	317	21	AAG20764	Arabidopsis thalia
42	34	68.0	346	21	AAG20763	Arabidopsis thalia
43	34	68.0	375	21	AAG20762	Arabidopsis thalia
44	34	68.0	541	8	AAP70433	Human atrial natri
45	34	68.0	541	17	AAR95586	Atrial natriuretic

ALIGNMENTS

RESULT 1
AAW53301
ID AAW53301 standard; peptide; 10 AA.
XX
AC AAW53301;
XX
DT 03-JUL-1998 (first entry)
XX
DE CS4-CFA/I family specific antibody responsive peptide #36.
XX
KW Escherichia coli; CS4-CFA/I family; antibody; immunisation; ETEC;
KW enterotoxigenic; immune response.
XX
OS Synthetic.
OS Escherichia coli.
XX
PN WO9805348 A1.
XX
PD 12-FEB-1998.
XX
PF 01-AUG-1997; 97WO US13476.
XX
PR 05-AUG-1996; 96US-0023145.
PR 02-AUG-1996; 96US-0023076.
XX
PA (USSA) US DEPT OF THE ARMY.
XX
PI Cassels F, Loomis Price L;
XX
DR WPI; 1998-145348/13.
XX
PT Peptide(s) responsive to antibodies against Escherichia coli
PT CS4 CFA/I family proteins - are subunits of consensus peptide useful
PT for immunisation, and consequent antibody compositions, useful in

PT assays and treatment of infection
XX
PS Claim 2; Page 14; 19pp; English.
XX
CC The present sequence represents a peptide responsive to antibodies
CC against Escherichia coli CS4-CFA/I family proteins. The peptide and
CC compositions containing such peptides are useful for immunisation to
CC raise antibodies to organisms producing the CS4 CFA/I family of
CC proteins. The CS4 CFA/I family belong to the enterotoxigenic (ETEC)
CC class of Escherichia coli, one of five classes of E. coli causing
CC diarrhoea. ETEC are the most common class and cause high infant
CC mortality and illness in adult travellers in developing countries. The
CC peptides are also useful to determine whether individual animals have
CC antibodies to ETEC E. coli. The antibody compositions can be used in
CC assays to detect organisms bearing the CS4 CFA/I family proteins, in
CC which a culture of organisms is contacted with the composition for
CC sufficient time for interaction to occur, and the culture is examined
CC to determine if a CS4 CFA/I family protein/antibody complex has formed.
CC The antibody compositions can also be used to treat, or immunise a
CC susceptible host against, illness arising from infection with bacteria
CC bearing CS4 CFA/I family proteins, by administering a bacteria
CC agglutinating effective amount, optionally with an adjuvant.
XX
SQ Sequence 10 AA;

Query Match 100.0%; Score 50; DB 19; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.0017;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSAVALTYSP 10
||||||||||
Db 1 psavaltysp 10

RESULT 2
AAW17004
ID AAW17004 standard; peptide; 46 AA.
XX
AC AAW17004;
XX
DT 25-JUL-1997 (first entry)
XX
DE Immunogenic consensus peptide against E.coli CS4 CFA/I.
XX
KW Immunisation; fimbrial protein; colonisation factor antigen;
KW antibody.
XX
OS Escherichia coli.
OS Synthetic.
XX
PN WO9638481/1 A1.
XX
PD 05-DEC-1996.
XX
PF 03-JUN-1996; 96WO-US08730.
XX
PR 02-JUN-1995; 95US-0460617.
XX
PA (USSA) US DEPT OF THE ARMY.
XX
PI Anderson J, Carter JM, Cassels F;
XX
DR WPI; 1997-034101/03.
XX
PT New consensus peptide from fimbrial proteins of the E. coli family
PT CS4 CFA/I and denatured fimbrial proteins, used for immunisation
PT against infection by bacteria of this family
XX
PS Claim 1; Page 11; 17pp; English.
XX
CC The present sequence is a consensus sequence that was constructed
CC from the highly conserved N-terminal region of fimbrial proteins from
CC CFA/I, CS1, CS2, CS4, CS17 and PCF 0166, and was shown to generate
CC antibodies against all members of the family. The consensus sequence
CC also contains both B and T cell epitopes. It can be used to immunise
CC against disease caused by enterotoxic E. coli of the family CS4-CFA/I.
CC Also antibodies raised against the E. coli CS4-CFA/I family can be
CC used as diagnostic reagents to identify antigens.
XX
SQ Sequence 46 AA;

Query Match 100.0%; Score 50; DB 18; Length 46;
Best Local Similarity 100.0%; Pred. No. 0.0078;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSAVALTYSP 10
||||||||||
Db 26 psavaltysp 35

RESULT 3
AAW53607
ID AAW53607 standard; peptide; 46 AA.
XX
AC AAW53607;
XX
DT 03-JUL-1998 (first entry)
XX
DE CS4 CFA/I family specific antibody responsive consensus peptide.
XX
KW Escherichia coli; CS4 CFA/I family; antibody; immunisation; ETEC;
KW enterotoxigenic; immune response.
XX
OS Synthetic.
OS Escherichia coli.
XX
PN WO9825948 A1.
XX
PD 18-JUN-1998.
XX
PF 01-AUG-1997; 97WO-US13476.
XX
PR 05-AUG-1996; 96US-0023145.
PR 02-AUG-1996; 96US-0024076.
XX
PA (USSA) US DEPT OF THE ARMY.
XX
PI Cassels F, Loomis-Price L;
XX
DR WPI; 1998-345408/18.
XX
PT Peptide(s) responsive to antibodies against Escherichia coli
PT CS4-CFA/I family proteins are subunits of consensus peptide useful
PT for immunisation, and consequent antibody compositions, useful in
PT assays and treatment of infection
XX
PS Example 2; Page 6; 19pp; English.
XX
CC The present sequence represents a peptide responsive to antibodies
CC against Escherichia coli CS4 CFA/I family proteins. The peptide and
CC compositions containing such peptides are useful for immunisation to
CC raise antibodies to organisms producing the CS4 CFA/I family of
CC proteins. The CS4-CFA/I family belong to the enterotoxigenic (ETEC)
CC class of Escherichia coli, one of five classes of E. coli causing
CC diarrhoea. ETEC are the most common class and cause high infant
CC mortality and illness in adult travellers in developing countries. The
CC peptides are also useful to determine whether individual animals have
CC antibodies to ETEC E. coli. The antibody compositions can be used in
CC assays to detect organisms bearing the CS4 CFA/I family proteins, in
CC which a culture of organisms is contacted with the composition for
CC sufficient time for interaction to occur, and the culture is examined
CC to determine if a CS4-CFA/I family protein/antibody complex has formed.
CC The antibody compositions can also be used to treat, or immunise a
CC susceptible host against, illness arising from infection with bacteria

```
CC   bearing CS4-CFA/I family proteins, by administering a bacteria
CC   agglutinating effective amount, optionally with an adjuvant.
XX
SQ   Sequence   36 AA;


  Query Match             100.0%;  Score 50;  DB 19;  Length 36;
  Best Local Similarity   100.0%;  Pred. No. 0.0074;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 PSAVALIYSP 10
           ||||||||||
Db      26 psavaltysp 35


RESULT   4
AAW24221
ID   AAW24221 standard; peptide; 37 AA.
XX
AC   AAW24221;
XX
DT   17-MAR-1998  (first entry)
XX
DE   Peptide fragment from Escherichia coli CFA/1.
XX
KW   T-lymphocyte epitope; diagnosis; antigen; infectious disease;
KW   delayed-type hypersensitivity assay; vaccine development.
XX
OS   Escherichia coli.
XX
PN   WO9727462-A2.
XX
PD   31-JUL-1997.
XX
PF   27-JAN-1997;   97WO-US01084.
XX
PR   26-JAN-1996;   96US-0010679.
XX
PA   (USSA ) US DEPT ARMY GOVERNMENT US ARMY MEDICAL.
XX
PI   Brix DL,  Sitz KV;
XX
DR   WPI; 1997-393814/36.
XX
PT   Peptide fragments containing antigen epitope(s) used to trace
PT   diseases - used in a delayed-type hypersensitivity assay, for in
PT   vivo mapping of human T-lymphocyte epitope(s) e.g. for diagnosis,
PT   vaccine development etc
XX
PS   Disclosure; Page 10; 14pp; English.
XX
CC   Peptides AAW24221-6 from Escherichia coli may be used in the method
CC   of the invention which relates to the tracing of sources of infectious
CC   diseases. The method comprises preparing a short (9-50 amino acid)
CC   peptide containing at least one non-conserved epitope of an organism,
CC   injecting a composition containing the peptide intradermally into a test
CC   subject in a delayed-type hypersensitivity (DTH) assay and observing the
CC   injection site at intervals for induration. The method allows the
CC   T-lymphocyte epitopes of a large antigen to be determined in vivo in
CC   humans. The method is useful in medicine e.g. in diagnosis, monitoring
CC   and treatment design for infectious disease exposure, active autoimmune
CC   disease, allergic diseases and malignancy. It is especially useful for
CC   tracing infectious diseases e.g HIV, particularly when a sequence is
CC   present only in certain strains of an organism, and developing suitable
CC   vaccines. Vaccinated individuals can also be tested to verify protection
CC   against a particular strain. The method allows in vivo mapping of
CC   T-lymphocyte epitopes, not previously possible. The method is simpler,
CC   more rapid and more sensitive. It can also be applied in a variety of
CC   environments e.g. undeveloped regions since specialist equipment is not
CC   required.
XX
SQ   Sequence   37 AA;


  Query Match             100.0%;  Score 50;  DB 18;  Length 37;
  Best Local Similarity   100.0%;  Pred. No. 0.0075;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 PSAVALIYSP 10
           ||||||||||
Db      26 psavaltysp 35


RESULT   5
AAW09420
ID   AAW09420 standard; peptide; 37 AA.
XX
AC   AAW09420;
XX
DT   25-JUL-1997  (first entry)
XX
DE   Immunogenic peptide against E.coli CS4 CFA/1.
XX
KW   Immunisation; fimbrial protein; colonisation factor antigen;
KW   antibody.
XX
OS   Escherichia coli.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Disulfide bond  1
FT                   /note= "The cysteine residue was added to the
FT                   consensus peptide to allow bonding with
FT                   iodoacetylated albumin or toxoid, providing
FT                   conjugated proteins"
FT   Peptide         2..37
FT                   /label  Consensus_sequence
XX
PN   WO9638171-A1.
XX
PD   05-DEC-1996.
XX
PF   03-JUN-1996;   96WO-US08730.
XX
PR   02-JUN-1995;   95US-0460617.
XX
PA   (USSA ) US DEPT OF THE ARMY.
XX
PI   Anderson J,  Carter JM,  Cassels F;
XX
DR   WPI; 1997-034101/03.
XX
PT   New consensus peptide from fimbrial proteins of the E. coli family
PT   CS4-CFA/1  and denatured fimbrial proteins, used for immunisation
PT   against infection by bacteria of this family
XX
PS   Claim 2; Page 11; 17pp; English.
XX
CC   A consensus sequence was constructed from the highly conserved
CC   N-terminal region of fimbrial proteins from CFA/1, CS1, CS2, CS4,
CC   CS17 and PCF 0166, and was shown to generate antibodies against
CC   all members of the family. The consensus sequence also contains
CC   both B- and T-cell epitopes. The present sequence represents the
CC   consensus sequence with a cysteine residue at the N-terminus of
CC   the peptide to allow conjugated peptides to be produced. This allows
CC   greater increases in antigenicity when used to immunise against
CC   disease caused by enterotoxic E. coli of the family CS4-CFA/1.
CC   Also antibodies raised against the E. coli CS4 CFA/1 family can be
CC   used as diagnostic reagents to identify antigens.
XX
SQ   Sequence   37 AA;


  Query Match             100.0%;  Score 50;  DB 18;  Length 37;
  Best Local Similarity   100.0%;  Pred. No. 0.0075;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
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Qy       1 PSAVALIYSP 10
           ||||||||||
Db      27 psavaltysp 36


RESULT   6
AAW48316
ID   AAW48316 standard; peptide;  37 AA.
XX
AC   AAW48316;
XX
DT   02-JUL-1998  (first entry)
XX
DE   Escherichia coli family CS4 CFA/I immunogen consensus peptide.
XX
KW   Monoclonal antibody; agglutinator; Escherichia coli; prophylaxis;
KW   CS4 CFA/I family protein; diarrhoea.
XX
OS   Synthetic.
OS   Escherichia coli.
XX
PN   WO9805687-A1.
XX
PD   12-FEB-1998.
XX
PF   01-AUG-1997;   97WO-US13477.
XX
PR   02-AUG-1996;   96US-0023075.
XX
PA   (USSA ) US DEPT OF THE ARMY.
PA   (VIRI ) VIRION SYSTEMS INC.
XX
PI   Cassels F;  Lees A;  Schuman R;
XX
DR   WPI; 1998-14553/13.
XX
PT   Monoclonal antibody agglutinating Escherichia coli with CS4 CFA/I
PT   family protein - is useful in assays and for treatment or
PT   prophylaxis against illness arising from infection with E. coli
PT   bearing CS4 CFA/I family proteins
XX
PS   Disclosure; Page 4; 14pp; English.
XX
CC   The present sequence represents an Escherichia coli family CS4 CFA/I
CC   immunogen consensus peptide. The present invention describes a new
CC   monoclonal antibody which binds exclusively and specifically to SAVALIYS,
CC   agglutinates bacteria bearing CS4-CFA/I family proteins and is produced
CC   by hybridoma 96 109FEB 1811. The monoclonal antibody can agglutinate
CC   members of the Escherichia coli family CSA-CFA/I, since it was raised to
CC   a consensus peptide known to raise antibodies against proteins of all
CC   the CSA-CFA/I family. E. coli causing diarrhoea are grouped into five
CC   classes, of which enterotoxigenic (ETEC), to which the CS4-CFA/I family
CC   belong, are the most common and pose the greatest risk to travellers.
CC   ETEC E. coli cause high infant mortality and illness in adult travellers
CC   in developing countries. The antibody is useful in assays to detect/
CC   identify organisms bearing CS4 CFA family proteins, by contacting
CC   cultures of organisms for sufficient time for interaction, and
CC   determining whether a CS4 CFA/I family protein/antibody complex has
CC   formed. It can be included in compositions with a carrier appropriate
CC   for application to bacteria-containing growth media, optionally with a
CC   tag (e.g. a fluorescing agent or colorometric tag, to assist
CC   identification of the complex. It can also be included in compositions
CC   with pharmaceutically acceptable carriers, especially saline, useful for
CC   treating or prophylaxing against illness arising from infection with
CC   bacteria bearing CS4 CFA/I family proteins.
XX
SQ   Sequence   37 AA;


  Query Match             100.0%;  Score 50;  DB 19;  Length 37;
  Best Local Similarity   100.0%;  Pred. No. 0.0075;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 PSAVALIYSP 10
           ||||||||||
Db      27 psavaltysp 36


RESULT   7
AAB06210
ID   AAB06210 standard; peptide;  38 AA.
XX
AC   AAB06210;
XX
DT   22-NOV-2000  (first entry)
XX
DE   Escherichia coli consensus peptide.
XX
KW   E. coli; solid phase conjugate vaccines; bacterial infection;
KW   viral infection; parasitic infection; fungal infection; rickettsiae.
XX
OS   Escherichia coli.
XX
PN   WO200025812-A2.
XX
PD   11-MAY-2000.
XX
PF   29-OCT-1999;   99WO-US25425.
XX
PR   29-OCT-1998;   98US-0106090.
XX
PA   (LEES/) LEES A.
XX
PI   Lees A;
XX
DR   WPI; 2000-365401/31.
XX
PT   Preparation of solid phase vaccine for treating viral, bacterial,
PT   rickettsiae, and fungal diseases, involves adsorbing protein to solid
PT   phase adjuvant and covalently linking carbohydrate to adsorbed protein
PT
XX
PS   Example 1; Page 25; 40pp; English.
XX
CC   The present sequence is a consensus peptide sequence from Escherichia
CC   coli. It was used in the production of solid phase conjugate vaccines,
CC   which can be used to treat and produce antibodies against bacterial,
CC   viral, parasitic or fungal infections.
XX
SQ   Sequence   38 AA;


  Query Match             100.0%;  Score 50;  DB 21;  Length 38;
  Best Local Similarity   100.0%;  Pred. No. 0.0077;
  Matches   10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 PSAVALIYSP 10
           ||||||||||
Db      27 psavaltysp 36


RESULT   8
AAW17904
ID   AAW17904 standard; peptide;  46 AA.
XX
AC   AAW17904;
XX
DT   25-JUL-1997  (first entry)
XX
DE   Immunogenic consensus peptide 2 against E.coli CS4 CFA/I.
XX
KW   Immunisation; fimbrial protein; colonisation factor antigen;
KW   antibody.
XX
OS   Escherichia coli.
```

OS Synthetic.
XX
PN WO9638171-A1.
XX
PD 05-DEC-1996.
XX
PF 04-JUN-1996; 96WO-US08730.
XX
PR 02-JUN-1995; 95US-0460617.
XX
PA (USSA) US DEPT OF THE ARMY.
XX
PI Anderson J, Carter JM, Cassels F;
XX
DR WPI; 1997-044101/03.
XX
PT New consensus peptide from fimbrial proteins of the E. coli family
PT CS4-CFA/I - and denatured fimbrial proteins, used for immunisation
PT against infection by bacteria of this family
XX
PS Disclosure; Page 3; 17pp; English.
XX
CC The present sequence is consensus peptide 2 sequence that was constructed
CC from the highly conserved N-terminal region of fimbrial proteins from
CC CFA/I, CS1, CS2, CS4, CS17 and PCF 0166, and was shown to generate
CC antibodies against all members of the family. The consensus sequence
CC also contains both B and T cell epitopes. It can be used to immunise
CC against disease caused by enterotoxic E. coli of the family CS4-CFA/I.
CC Also antibodies raised against the E. coli CS4-CFA/I family can be
CC used as diagnostic reagents to identify antigens.
XX
SQ Sequence 36 AA;

Query Match 88.0%; Score 44; DB 18; Length 36;
Best Local Similarity 80.0%; Pred. No. 0.11;
Matches 8; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSAVALTYSP 10
|:::|||||| |
Db 26 pasvaltysp 35

RESULT 9
AAW24222
ID AAW24222 standard; peptide; 47 AA.
XX
AC AAW24222;
XX
DT 17-MAR-1998 (first entry)
XX
DE Peptide fragment from Escherichia coli CS1.
XX
KW T-lymphocyte epitope; diagnosis; antigen; infectious disease;
KW delayed type hypersensitivity assay; vaccine development.
XX
OS Escherichia coli.
XX
PN WO9727462-A2.
XX
PD 31-JUL-1997.
XX
PF 27-JAN-1997; 97WO-US01084.
XX
PR 26-JAN-1996; 96US-0010679.
XX
PA (USSA) US DEPT ARMY GOVERNMENT US ARMY MEDICAL.
XX
PI Brix DL, Sitz KV;
XX
DR WPI; 1997-393814/46.
XX
PT Peptide fragments containing antigen epitope(s) used to trace
PT diseases - used in a delayed-type hypersensitivity assay, for in
PT vivo mapping of human T lymphocyte epitope(s) e.g. for diagnosis,
PT vaccine development etc
XX
PS Disclosure; Page 20; 14pp; English.
XX
CC Peptides AAW24221-6 from Escherichia coli may be used in the method
CC of the invention which relates to the tracing of sources of infectious
CC diseases. The method comprises preparing a short (9-50 amino acid)
CC peptide containing at least one non-conserved epitope of an organism,
CC injecting a composition containing the peptide intradermally into a test
CC subject in a delayed-type hypersensitivity (DTH) assay and observing the
CC injection site at intervals for induration. The method allows the
CC T-lymphocyte epitopes of a large antigen to be determined in vivo in
CC humans. The method is useful in medicine e.g. in diagnosis, monitoring
CC and treatment design for infectious disease exposure, active autoimmune
CC disease, allergic diseases and malignancy. It is especially useful for
CC tracing infectious diseases e.g HIV, particularly when a sequence is
CC present only in certain strains of an organism, and developing suitable
CC vaccines. Vaccinated individuals can also be tested to verify protection
CC against a particular strain. The method allows in vivo mapping of
CC T-lymphocyte epitopes, not previously possible. The method is simpler,
CC more rapid and more sensitive. It can also be applied in a variety of
CC environments e.g. undeveloped regions since specialist equipment is not
CC required.
XX
SQ Sequence 47 AA;

Query Match 88.0%; Score 44; DB 18; Length 47;
Best Local Similarity 80.0%; Pred. No. 0.11;
Matches 8; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Qy 1 PSAVALTYSP 10
|:::|||||| |
Db 26 pasvaltysp 35

RESULT 10
AAW17906
ID AAW17906 standard; peptide; 37 AA.
XX
AC AAW17906;
XX
DT 25-JUL-1997 (first entry)
XX
DE Peptide CS1 from denatured protein subunits of E.coli fimbriae.
XX
KW Immunisation; fimbrial protein; colonisation factor antigen;
KW antibody.
XX
OS Escherichia coli.
OS Synthetic.
XX
PN WO9638171-A1.
XX
PD 05-DEC-1996.
XX
PF 04-JUN-1996; 96WO-US08730.
XX
PR 02-JUN-1995; 95US-0460617.
XX
PA (USSA) US DEPT OF THE ARMY.
XX
PI Anderson J, Carter JM, Cassels F;
XX
DR WPI; 1997-044101/04.
XX
PT New consensus peptide from fimbrial proteins of the E. coli family
PT CS4-CFA/I - and denatured fimbrial proteins, used for immunisation
PT against infection by bacteria of this family
XX
PS Disclosure; Page 4; 17pp; English.

```
XX
CC   The present sequence is a peptide from the denatured protein subunit
CC   of timbriae from CS1. Many of the denatured proteins give rise to
CC   antibodies that are reactive with proteins of other strains as shown
CC   by precipitation studies on nitrocellulose. They are also reactive
CC   with surface antigens of the timbriae as shown by agglutination
CC   of organisms. They can be used to immunise against disease caused by
CC   enterotoxic E. coli of the family CS4 CFA/I. Also antibodies raised
CC   against the E. coli CS4 CFA/I family can be used as diagnostic reagents
CC   to identify antigens.
XX
SQ   Sequence    47 AA;


  Query Match             88.0%;  Score 44;  DB 18;  Length 47;
  Best Local Similarity   80.0%;  Pred. No. 0.11;
  Matches    8;  Conservative    2;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 PSAVALIYSP 10
           ||:||||||
Db      26 pssvaliysp 35


RESULT  11
AAW17912
ID   AAW17912 standard; peptide; 148 AA.
XX
AC   AAW17912;
XX
DT   25-JUL-1997  (first entry)
XX
DE   Peptide CS1 from denatured protein subunits of E.coli timbriae.
XX
KW   Immunisation; timbrial protein; colonisation factor antigen;
KW   antibody.
XX
OS   Escherichia coli.
OS   Synthetic.
XX
PN   WO9638171-A1.
XX
PD   05-DEC-1996.
XX
PF   03-JUN-1996;   96WO-US08730.
XX
PR   02-JUN-1995;   95US-0460617.
XX
PA   (USSA ) US DEPT OF THE ARMY.
XX
PI   Anderson J,  Carter JM,  Cassels F;
XX
DR   WPI; 1997-034101/04.
XX
PT   New consensus peptide from timbrial proteins of the E. coli family
PT   CS4 CFA/I  and denatured timbrial proteins, used for immunisation
PT   against infection by bacteria of this family
XX
PS   Disclosure; Page 4; 17pp; English.
XX
CC   The present sequence is a peptide from the denatured protein subunit
CC   of timbriae from CS1. Many of the denatured proteins give rise to
CC   antibodies that are reactive with proteins of other strains as shown
CC   by precipitation studies on nitrocellulose. They are also reactive
CC   with surface antigens of the timbriae as shown by agglutination
CC   of organisms. They can be used to immunise against disease caused by
CC   enterotoxic E. coli of the family CS4 CFA/I. Also antibodies raised
CC   against the E. coli CS4 CFA/I family can be used as diagnostic reagents
CC   to identify antigens.
XX
SQ   Sequence   148 AA;


  Query Match             88.0%;  Score 44;  DB 18;  Length 148;
  Best Local Similarity   80.0%;  Pred. No. 0.52;
  Matches    8;  Conservative    2;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 PSAVALIYSP 10
           ||:||||||
Db      26 pssvaliysp 35


RESULT  12
AAR21413
ID   AAR21413 standard; Protein; 171 AA.
XX
AC   AAR21413;
XX
DT   17-MAY-1992  (first entry)
XX
DE   Sequence of a major CS1 pilin antigen of enterotoxigenic
DE   Escherichia coli encoded by coo A gene.
XX
KW   Antigen; vaccine; diarrhoea; probe.
XX
OS   Escherichia coli [MC10].
XX
FH   Key             Location/Qualifiers
FT   Peptide          1..23
FT                    /label= signal
XX
PN   WO9203563-A.
XX
PD   06-FEB-1992.
XX
PF   23-JUL-1991;   91WO-US05217.
XX
PR   24-JUL-1990;   90US-0557545.
XX
PA   (UYEM ) EMORY UNIV.
XX
PI   Scott JR,  Perez-casal J;
XX
DR   WPI; 1992-064082/08.
DR   N-PSDB; AAQ20529.
XX
PT   Major CS1 pilin antigen of enterotoxigenic Escherichia coli
PT   with probes binding to DNA encoding the antigen, useful in
PT   diagnosis of enterotoxigenic E.coli and as vaccine
XX
PS   Example; Fig 2; 43pp; English.
XX
CC   The inventors claim a DNA sequence (AAQ20529), a vector, transformed
CC   microbe, process, a probe, a vaccine and the major CS1 pilin antigen
CC   itself.  The vector is selected from the recombinant plasmids pEU600,
CC   pEU605 and pEU452.  The host cell is E. coli K12 strain JM83.  The
CC   probe comprises the 318 bp internal BHal digestion prod. of AAQ20529.
XX
SQ   Sequence   171 AA;


  Query Match             88.0%;  Score 44;  DB 13;  Length 171;
  Best Local Similarity   80.0%;  Pred. No. 0.62;
  Matches    8;  Conservative    2;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 PSAVALIYSP 10
           ||:||||||
Db      49 pssvaliysp 58


RESULT  13
AAW24223
ID   AAW24223 standard; peptide; 47 AA.
XX
AC   AAW24223;
XX
DT   17-MAR-1998  (first entry)
```

XX
DE Peptide fragment from Escherichia coli CS4.
XX
KW T-lymphocyte epitope; diagnosis; antigen; infectious disease;
KW delayed-type hypersensitivity assay; vaccine development.
XX
OS Escherichia coli.
XX
PN WO9727462-A2.
XX
PD 31-JUL-1997.
XX
PF 27-JAN-1997; 97WO US01084.
XX
PR 26-JAN-1996; 96US-0010679.
XX
PA (USSA) US DEPT ARMY GOVERNMENT US ARMY MEDICAL.
XX
PI Brix DL, Sitz KV;
XX
DR WPI; 1997-394814/36.
XX
PT Peptide fragments containing antigen epitope(s) used to trace
PT diseases - used in a delayed-type hypersensitivity assay, for in
PT vivo mapping of human T-lymphocyte epitope(s) e.g. for diagnosis,
PT vaccine development etc
XX
PS Disclosure; Page 10; 14pp; English.
XX
CC Peptides AAW24221-6 from Escherichia coli may be used in the method
CC of the invention which relates to the tracing of sources of infectious
CC diseases. The method comprises preparing a short (9-50 amino acid)
CC peptide containing at least one non-conserved epitope of an organism,
CC injecting a composition containing the peptide intradermally into a test
CC subject in a delayed-type hypersensitivity (DTH) assay and observing the
CC injection site at intervals for induration. The method allows the
CC T-lymphocyte epitopes of a large antigen to be determined in vivo in
CC humans. The method is useful in medicine e.g. in diagnosis, monitoring
CC and treatment design for infectious disease exposure, active autoimmune
CC disease, allergic diseases and malignancy. It is especially useful for
CC tracing infectious diseases e.g HIV, particularly when a sequence is
CC present only in certain strains of an organism, and developing suitable
CC vaccines. Vaccinated individuals can also be tested to verify protection
CC against a particular strain. The method allows in vivo mapping of
CC T-lymphocyte epitopes, not previously possible. The method is simpler,
CC more rapid and more sensitive. It can also be applied in a variety of
CC environments e.g. undeveloped regions since specialist equipment is not
CC required.
XX
SQ Sequence 37 AA;

Query Match 84.0%; Score 42; DB 18; Length 37;
Best Local Similarity 80.0%; Pred. No. 0.27;
Matches 8; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 PSAVALTYSP 10
|:|| |||||
Db 26 ptaveltysp 35

RESULT 14
AAW17907
ID AAW17907 standard; peptide; 37 AA.
XX
AC AAW17907;
XX
DT 25-JUL-1997 (first entry)
XX
DE Peptide CS4 from denatured protein subunits of E.coli fimbriae.
XX
KW Immunisation; fimbrial protein; colonisation factor antigen;
KW antibody.
XX
OS Escherichia coli.
OS Synthetic.
XX
PN WO9638171-A1.
XX
PD 05-DEC-1996.
XX
PF 03-JUN-1996; 96WO-US08730.
XX
PR 02-JUN-1995; 95US-0460617.
XX
PA (USSA) US DEPT OF THE ARMY.
XX
PI Anderson J, Carter JM, Cassels F;
XX
DR WPI; 1997-034101/03.
XX
PT New consensus peptide from fimbrial proteins of the E. coli family
PT CS4 CFA/I and denatured fimbrial proteins, used for immunisation
PT against infection by bacteria of this family
XX
PS Disclosure; Page 4; 17pp; English.
XX
CC The present sequence is a peptide from the denatured protein subunit
CC of fimbriae from CS4. Many of the denatured proteins give rise to
CC antibodies that are reactive with proteins of other strains as shown
CC by precipitation studies on nitrocellulose. They are also reactive
CC with surface antigens of the fimbriae as shown by agglutination
CC of organisms. They can be used to immunise against disease caused by
CC enterotoxic E. coli of the family CS4-CFA/I. Also antibodies raised
CC against the E. coli CS4-CFA/I family can be used as diagnostic reagents
CC to identify antigens.
XX
SQ Sequence 37 AA;

Query Match 84.0%; Score 42; DB 18; Length 37;
Best Local Similarity 80.0%; Pred. No. 0.27;
Matches 8; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 1 PSAVALTYSP 10
|:|| |||||
Db 26 ptaveltysp 35

RESULT 15
AAW17913
ID AAW17913 standard; peptide; 117 AA.
XX
AC AAW17913;
XX
DT 25-JUL-1997 (first entry)
XX
DE Peptide CS4 from denatured protein subunits of E.coli fimbriae.
XX
KW Immunisation; fimbrial protein; colonisation factor antigen;
KW antibody.
XX
OS Escherichia coli.
OS Synthetic.
XX
PN WO9638171-A1.
XX
PD 05-DEC-1996.
XX
PF 03-JUN-1996; 96WO-US08730.
XX
PR 02-JUN-1995; 95US-0460617.
XX
PA (USSA) US DEPT OF THE ARMY.
XX
PI Anderson J, Carter JM, Cassels F;

```
XX
DR   WPI; 1997-034101/04.
XX
PT   New consensus peptide from timbrial proteins of the E. coli family
PT   CS4 CFA/I  and denatured timbrial proteins, used for immunisation
PT   against infection by bacteria of this family
XX
PS   Disclosure; Page 4; 17pp; English.
XX
CC   The present sequence is a peptide from the denatured protein submit
CC   of timbriae from CS4. Many of the denatured proteins give rise to
CC   antibodies that are reactive with proteins of other strains as shown
CC   by precipitation studies on nitrocellulose. They are also reactive
CC   with surface antigens of the timbriae as shown by agglutination
CC   of organisms. They can be used to immunise against disease caused by
CC   enterotoxic E. coli of the family CS4 CFA/I. Also antibodies raised
CC   against the E. coli CS4 CFA/I family can be used as diagnostic reagents
CC   to identify antigens.
XX
SQ   Sequence  117 AA;
```

```
  Query Match             84.0%;  Score 42;  DB 18;  Length 117;
  Best Local Similarity   80.0%;  Pred. No. 0.98;
  Matches    8;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy       1 PSAVALEYSP 10
           |:|| ||||
Db      26 PTAVELLYSP 35
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Search completed: March 12, 2002, 12:48:04
Job time: 924 sec
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